

We claim:

1. A functionalized, structurally modified silica, characterized by functional groups fixed on the surface, the groups being 3-methacryloxypropylsilyl and/or glycidyloxypropylsilyl, with the following physico-chemical characteristic data:

5	BET surface area	m ² /g	25 - 380
	Primary particle size	nm	6 - 45
	Tamped density	g/l	50 - 400
	pH		3 - 10
	Carbon content	%	0.1 - 15
10	DBP number	%	<200

2. The functionalized, structurally modified silica of Claim 1 wherein the silica is produced by pyrolysis prior to surface modification.

3. The functionalized, structurally modified silica of Claim 1 wherein the BET surface area ranges from 90±15 to 380±15.

15 4. A process for the preparation of functionalized, structurally modified silica according to Claim 1, comprising spraying silica first with water or dilute acid and then with a surface modification reagent or a mixture of several surface modification reagents in a mixing vessel, intensively mixing the silica and said reagent, optionally re-mixing the silica for 15 to 30 minutes and then heat-treating at a temperature of 100 to 400 °C over a period of 1 to 6 h, to thereby produce a functionalized silica, then deconstructing or compacting said silica and optionally re-grinding said silica in a mill.

20 5. A coating composition containing the functionalized, structurally modified silica according to Claim 1 in a binder vehicle.